

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

1-17 (Canceled).

18. (Currently Amended) A powder composition for the preparation of compacted and sintered structural parts, the powder composition comprising an iron or iron based powder, wherein less than about 5% of the powder particles have a size below 45 μm [[,]]; graphite, wherein the graphite is in an amount up to 1% by weight of ~~graphite~~; and a lubricating amount of an alkylalkoxy or polyetheralkoxy silane, wherein the alkyl group of the alkylalkoxy silane and the polyether chain of the polyetheralkoxy silane include between 8 and 30 carbon atoms, and the alkoxy group includes 1-3 carbon atoms.

19. (Previously Presented) The powder composition of claim 18, wherein the alkyl group and polyether chain of the alkylalkoxy or polyetheralkoxy silane has between 10 and 24 carbon atoms.

20. (Previously Presented) The powder composition of claim 18, wherein the alkylalkoxy or polyetheralkoxy silane is selected from the group consisting of octyl-tri-methoxy silane, hexadecyl-tri-methoxy silane, and polyethyleneether-trimethoxy silane with 10 ethylene ether groups.

21. (Previously Presented) The powder composition of claim 18, wherein the alkylalkoxy or polyetheralkoxy silane is present in an amount of about 0.05-0.5%.

22. (Previously Presented) The powder composition of claim 21, wherein the alkylalkoxy or polyetheralkoxy silane is present in an amount of about 0.1-0.4%.

23. (Previously Presented) The powder composition of claim 21, wherein the alkylalkoxy or polyetheralkoxy silane is present in an amount of about 0.15-0.3%.

24. (Previously Presented) The powder composition of claim 18, wherein at least 40% of the iron or iron-based powder consists of particles having a particle size above about 106 μm .

25. (Previously Presented) The powder composition of claim 24, wherein at least 60% of the iron or iron-based powder consists of particles having a particle size above about 106 μm .

26. (Previously Presented) The powder composition of claim 18, wherein at least 40% of the iron-based powder consists of particles having a particle size above about 212 μm .

27. (Previously Presented) The powder composition of claim 26, wherein at least 60% of the iron-based powder consists of particles having a particle size above about 212 μm .

28. (Cancelled)

29. (Previously Presented) The powder composition of claim 18 further including alloying elements in an amount up to 10% by weight.

30. (Previously Presented) The composition of claim 29, wherein the alloying elements are selected from the group consisting of Mn, Cu, Ni, Cr, Mo, V, Co, W, Nb, Ti, Al, P, S and B.

31. (Previously Presented) A method for preparing high density green compacts comprising the following steps:

- (a) providing an iron-based powder composition of claim 18;
- (b) uniaxially compacting the powder in a die at a compaction pressure of at least about 800 MPa; and
- (c) ejecting the green body.

32-41. (Cancelled)

42. (New) The method of claim 31, wherein the green body has a green density of at least 7.6 g/cm³.

43. (New) A powder composition consisting essentially of:

- an iron or iron based powder, wherein less than about 5% of the powder particles have a size below 45 μm ;
- graphite, wherein the graphite is in an amount up to 1% by weight;
- a lubricating amount of an alkylalkoxy or polyetheralkoxy silane, wherein the alkyl group of the alkylalkoxy silane and the polyether chain of the polyetheralkoxy silane include between 8 and 30 carbon atoms, and the alkoxy group includes 1-3 carbon atoms;
- optionally a conventional lubricant in an amount up to about 0.5 wt.%; and

optionally at least one of (i) an alloying element selected from the group consisting of Mn, Cu, Ni, Cr, Mo, V, Co, W, Nb, Ti, Al, P, S and B, (ii) a machinability enhancing compound, (iii) a hard phase material, and (iv) a flow agent.

44. (New) The powder composition of claim 43, which (a) contains the conventional lubricant and (b) does not contain the at least one of (i) the alloying element selected from the group consisting of Mn, Cu, Ni, Cr, Mo, V, Co, W, Nb, Ti, Al, P, S and B, (ii) the machinability enhancing compound, (iii) the hard phase material, (iv) and the flow agent.

45. (New) The powder composition of claim 43, which (a) does not contain the conventional lubricant and (b) contains the at least one of (i) the alloying element selected from the group consisting of Mn, Cu, Ni, Cr, Mo, V, Co, W, Nb, Ti, Al, P, S and B, (ii) the machinability enhancing compound, (iii) the hard phase material, (iv) and the flow agent.

46. (New) The powder composition of claim 43, which (a) does not contain the conventional lubricant and (b) does not contain the at least one of (i) the alloying element selected from the group consisting of Mn, Cu, Ni, Cr, Mo, V, Co, W, Nb, Ti, Al, P, S and B, (ii) the machinability enhancing compound, (iii) the hard phase material, (iv) and the flow agent.

47. (New) A powder composition, comprising:
 an iron or iron based powder, wherein less than about 5% of the powder particles have a size below 45 μm ;
 graphite, wherein the graphite is in an amount up to 1% by weight; and

a lubricating amount of an alkylalkoxy or polyetheralkoxy silane, wherein the alkyl group of the alkylalkoxy silane and the polyether chain of the polyetheralkoxy silane include between 8 and 30 carbon atoms, and the alkoxy group includes 1-3 carbon atoms,

wherein the powder composition is formed by a process comprising mixing the iron or iron based powder with the silane to produce a mixture, and mixing the mixture only with graphite to produce the powder composition.